

REMARKS

Applicant has carefully reviewed and considered the Non-Final Office Action mailed on December 29, 2006, and the references cited therewith.

Claims 1, 4-6, and 10 are amended, claim 3 is canceled, claims 14-20 are added, and no claims are withdrawn; as a result, claims 1-2 and 4-20 are now pending in this application.

Applicant respectfully submits that claims 14-20 do not introduce any new subject matter and are intended to cover additional claimable subject matter fully supported by the originally filed specification.

§ 112 Rejection of the Claims

Claims 1-2, 4-9 & 13 were rejected under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) at the time the application was filed, had possession of the claimed invention. Applicant has amended claims 1, 4, 5, and 6 to more clearly recite the claimed subject matter.

Claims 1-2 & 4-13 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claims 1, 4, 5, 6, and 10 to more clearly recite the claimed subject matter.

Claims 1-2 & 4-13 were rejected under 35 USC § 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant has amended claims 1, 4, 5, 6, and 10 to more clearly recite the claimed subject matter.

Based on the forgoing, Applicant respectfully requests reconsideration and withdrawal of the 112 rejection for claims 1-2 and 4-13.

§ 103 Rejection of the Claims

Claims 1-2 & 4-13 are rejected (claims 4-5 & 8-9 tentatively) under 35 USC § 103(a) as being unpatentable over US Patent 6,660,208 to Hanna (hereinafter "Hanna") in view of US Patent 6,482,576 to Farnworth et al. (hereinafter Farnworth) as set forth in sections 4 of the actions mailed 12/8/2005 and 6/30/2006. Applicant respectfully traverses the rejection of the claims, and addresses their rejection as follows.

Independent Claims 1, 6, and 10

Applicant respectfully submits that the cited references do not support a proper prima facie case of obviousness as, besides other things, neither Hanna nor Farnworth, either independently or in combination, teach or suggest each and every element in independent claims 1, 6, or 10. For example, Applicant is unable to find a teaching or a suggestion of coating an ear shell with a UV-curable substance, creating a new layer of UV-curable substance, permitting a portion of the UV-curable substance to drain off the ear shell, leaving a residual uncured layer of the UV-curable substance on the ear shell, and exposing the ear shell to UV light to cure the residual uncured layer of the UV-curable substance in Hanna and Farnworth, either independently or in combination.

Applicant respectfully submits that although reference is made to "UV-curable substance" as claimed in independent claims 1 and 6, that the arguments equally apply to the "photo-curable polymer" as claimed in independent claim 10.

The Office Action states, "Hanna teaches making hearing aid shells via stereolithographic techniques, where in order to produce biocompatible products, it is necessary to detoxify by extracting cytotoxins remaining from the stereolithographic polymerization procedures, which may involve UV curing." (Page 6.) The Office Action goes on to state, "Several different means of doing so are taught, which are inclusive of extracting with alcohols, such as isopropyl alcohol alone, or with the use of such alcohols in ultrasonic bath. . . . Thereafter, post UV curing finishes the cure of the produced shell, and it is further taught that it is common practice to further coat hearing aid shells, such as with UV curable lacquer." (Page 6.)

In the Office Action, the Examiner admits that Hanna fails to teach all of the limitations of Applicant's claims. (Page 6). For example, the Examiner admits that Hanna is silent by not giving any details as to UV polymerization and extracting/removing the UV curable coating on a ear shell. (Page 6).

The Examiner then relies on Farnworth to cure the deficiencies of Hanna by stating, "Farnworth et al. teach a procedure for coating stereolithographic structures, where they teach their process is applicable to any structure made by stereolithography, which is advantageous for smoothing the surface to get rid of crevices at the layer interfaces on the surface, which are undesirable as they may be unsightly and they may collect dust, dirt and moisture." (Page 6). However, Farnworth appears to describe a method of smoothing a vertical side surface of a protective shell created by stereolithography rather than coating stereolithographic structures.

First, Farnworth appears to teach creating a protective shell formed by curing layers of material using a stereolithography process. At the end of the process, the platform is elevated and excess liquid material is drained from the STL-formed structure. In addition, the surfaces of the vertical sides of the at least partially polymerized structure may be somewhat nonplanar, having linear, slit-like, external horizontal crevices at the interfaces between adjacent layers. (Col. 11, lines 42-50).

In one embodiment, Farnworth appears to describe washing the structure to remove all unpolmerized liquid material from the external surfaces including the external crevices. (Col. 11, lines 57-61). On the other hand, Farnworth appears to teach or suggest a method of raising the platform to drain the excess material, keeping residual liquid photopolymer material retained in the external crevices and tilting the structure to allow a laser beam direct angle of incidence to the external crevices, allowing the laser beam to cure the liquid photopolymer material retained in the external crevices. (Col. 12, lines 28-55).

Farnworth, however, does not appear to describe, teach, or suggest coating an ear shell with a layer of an UV-curable substance, permitting a portion of the UV-curable substance to drain off the ear shell leaving a residual uncured layer of the UV-curable substance on the ear shell, exposing the ear shell to UV light to cure the residual

uncured layer of the UV-curable substance, removing any excess of the UV-curable substance, and exposing the ear shell to UV light a second time, as stated in independent claims 1, 6, and 10 as amended.

In particular, Farnworth describes building a shell around an object layer by layer while exposing each layer to UV light rather than coating the ear shell with a single layer, draining the ear shell, and then exposing the ear shell to UV light, as claimed. In addition, Farnworth appears to describe draining excess liquid from the structure leaving residual uncured material in the crevices of the vertical sides rather than leaving a residual uncured layer of the UV-curable substance on the ear shell, as claimed. Applicant respectfully submits that all words in a claim must be considered in judging the patentability of the claim against the prior art, and that leaving residual uncured material in the crevices of the vertical sides as described in Farnworth is not the same as leaving a residual layer of the UV-curable substance on the ear shell, as claimed in claims 1, 6, and 10, as amended.

Further, Applicant respectfully submits that the mere fact that Hanna and Farnsworth can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. Although Hanna mentions in passing that objects created by stereolithography can be coated with a UV-curable lacquer, it is unclear why Hanna would desire a protective coating produced by stereolithography as described by Farnsworth over an object already produced by stereolithography. It seems that the protective coating produced by Farnsworth would have the same cytotoxicity problems described as troublesome in Hanna, creating an additional needed step to nullify the cytotoxins in the protective coating. Thus, Applicant respectfully submits that neither Farnsworth nor Hanna suggest the desirability of the combination of the methods described in Farnsworth and Hanna.

As such, Applicant respectfully submits that each and every element and limitation of independent claims 1, 6, and 10 as amended are not taught or suggested by Hanna and Farnsworth, either individually or in combination. Accordingly, Applicant

respectfully requests reconsideration and withdrawal of the 103(a) rejection of independent claims 1, 6, and 10, as well as the claims depending therefrom.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney at (612) 236-0122 to facilitate prosecution of this matter.

CERTIFICATE UNDER 37 CFR §1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: **MS AMENDMENT** Commissioner for Patents, P.O. BOX 1450 Alexandria, VA 22313-1450, on this 9th day of March, 2007.

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